

Patent Claims:

1. Hydraulic vehicle brake system, including a hydraulic brake pressure generator which essentially consists of a master brake cylinder (11) and a hydraulic booster (7) connected upstream thereof, the pressure of which can be applied to wheel brakes of the vehicle, which hydraulic brake pressure generator is connected by way of a conduit (12, 12.2) to a pressure fluid supply reservoir (13), which hydraulic brake pressure generator includes a vacuum chamber (47) arranged essentially coaxially to the master brake cylinder as well as a booster piston (41) arranged therein, which hydraulic brake pressure generator is effectively connected to a master brake cylinder piston in the force-output direction by way of an actuating element (42) and, for the purpose of brake force boosting, can be acted upon by a hydraulic pressure of an electronically actuatable independent pressure source (4, 19, 20) which is connected to the hydraulic booster (7) by way of a conduit (50) in which a second analog or analogized valve (5) is arranged, c h a r a c t e r i z e d in that the pressure fluid supply reservoir (13a) is connectable to the electronically actuatable independent pressure source (4, 19, 20) by way of a conduit (12, 12.1) in which a first analog or analogized valve (6) is arranged, in that the vehicle brake system includes a simulator (61) cooperating with the brake actuating device and a device for detecting the driver deceleration request (60, 64), and in that the electronically actuatable

independent pressure source (4, 19, 20) is actuatable according to the detected driver deceleration request or according to an electronic brake control system.

2. Hydraulic vehicle brake system as claimed in claim 1, characterized in that the master brake cylinder (11) has a dual-circuit design and the pressure fluid supply reservoir (13) is unpressurized.
3. Hydraulic vehicle brake system as claimed in claim 1 or 2, characterized in that the independent pressure source (4, 19, 20) includes a motor-and-pump assembly (19, 20) and a hydraulic high-pressure accumulator (4).
4. Hydraulic vehicle brake system as claimed in any one of claims 1 to 3, characterized in that an electronic controlling and regulating unit (28) is provided which is used to regulate or control the analog or analogized valves (5, 6) for the purpose of applying a defined hydraulic pressure to the booster piston (41) of the hydraulic booster (7), and in that a determining unit (64) is associated with the electronic controlling and regulating unit (28) or is integrated into it for the purpose of determining the driver's braking request.
5. Hydraulic vehicle brake system as claimed in any one of claims 1 to 4, characterized in that the master brake cylinder (11) is connected to the wheel brakes (30, 31)

of the vehicle by way of a brake conduit (14) into which a separating valve (9) is inserted, and by way of subsequent brake conduit parts (14.1, 14.2) in which each one inlet valve (15.1, 15.2) is arranged.

6. Hydraulic vehicle brake system as claimed in any one of claims 1 to 5,  
c h a r a c t e r i z e d in that the wheel brakes (30, 31) of the vehicle are connected to the master brake cylinder (11) by way of a return conduit (17) in which outlet valves (16.1, 16.2), a low-pressure accumulator (18) and a change-over valve (8) are arranged.
7. Hydraulic vehicle brake system as claimed in any one of claims 3 to 6,  
c h a r a c t e r i z e d in that the pump (19) is connected to the return conduit (17) on the inlet side, while on the outlet side it is connectable through a branching (22) to the wheel brakes (30, 31) of the vehicle or to the high-pressure accumulator (4), and in that a non-return valve (23) and a damping chamber (57) are arranged between the pressure side (21) of the pump (19) and the branching (22).
8. Hydraulic vehicle brake system as claimed in claim 7,  
c h a r a c t e r i z e d in that from the branching (22) the pump (19) is connected to the high-pressure accumulator (4) by way of a conduit (24) in which an actuatable valve (2) is arranged, and in that from the branching (22) the pump (19) is connected to the brake

conduit parts (14.1, 14.2) by way of a conduit (25) in which an actuatable valve (1) is arranged.

9. Hydraulic vehicle brake system as claimed in claim 8, characterized in that the electronic controlling and regulating unit (28) is used to regulate or control the actuatable valves (1, 2) for the purpose of brake pressure control or buildup of hydraulic pressure in the high-pressure accumulator (4).
10. Hydraulic vehicle brake system as claimed in any one of claims 1 to 9, characterized in that the simulator includes at least one hydraulic chamber (65) which is connected to the conduit (50) between the hydraulic booster (7) by way of a conduit (62) in which an additional valve (63), preferably a NO valve (63) (open in the de-energized condition), is arranged.
11. Hydraulic vehicle brake system as claimed in any one of claims 4 to 10, characterized in that a separate charging circuit is provided for the high-pressure accumulator (4), in particular by means of a three-circuit hydraulic pump.
12. Hydraulic vehicle brake system as claimed in any one of claims 1 to 11, characterized in that the first and the second analog or analogized valve (5, 6) are NC valves (normally closed valves).

13. Hydraulic vehicle brake system as claimed in any one of claims 1 to 12,  
c h a r a c t e r i z e d in that the hydraulic brake pressure generator is essentially integrated into a hydraulic unit of the vehicle brake system.